5

1

Amendments to the Claims:

Please cancel claims 3, 10 and 17, and amend claims 1, 2, 4, 7-9, 13, 15 and 16 as shown in the following listing of claims. This listing of claims will replace all prior versions, and listings, of claims in the application.

9252490111;

- (currently amended) An impedance transformation network comprising: 1.
- an input node to receive an output signal; 2
- an output node to transmit the output signal; 3
- a fixed impedance transformation circuit connected between the 4
- input node and the output node, the fixed impedance transformation circuit being 5
- configured to provide a fixed impedance transformation to partially transform a
- first impedance at the output node to a second impedance at the input node; and 7
- a varactor device connected in series on a signal path from-between 8
- the input node to and the output node, the varactor device being configured to 9
- provide a variable impedance transformation in response to a power level of the 10
- output signal to partially transform the first impedance at the output node to the i i
- second impedance at the input node. 12
- 2. (currently amended) The impedance transformation network of claim 1 1
- wherein the varactor device includes a ferroelectric varactor connected in series 2
- on the signal path-between the fixed impedance transformation circuit and the
- output node.
- 3. (canceled). 1
- (currently amended) The impedance transformation network of claim 1 4.
- wherein the fixed impedance transformation circuit includes at least one 2
- transmission line on the a signal path between the input node and the output node 3
- and at least one shunt capacitor connected to the signal path.
- (original) The impedance transformation network of claim 4 wherein the 5.

2

shunt capacitor is a chip capacitor.

Attorney Docket No. 10031558-1 Scrial No. 10/804,356

Amendment and Response to Office Action

- 1 6. (original) The impedance transformation network of claim 4 wherein the
- 2 fixed impedance transformation circuit includes at least one additional
- 3 transmission line on a second signal path between a supply voltage terminal and
- 4 the signal path and at least one additional shunt capacitor connected to the second
- signal path, the second signal path at least partially being used to supply DC bias
- 6 voltage to the varactor device.
- 7. (currently amended) The impedance transformation network of claim 6-7
- 2 wherein the additional shunt capacitor is a surface mount technology capacitor.
- 8. (currently amended) A method of transmitting an output signal to an
- 2 output node, the method comprising:
- 3 receiving the output signal at an input node; and
- 4 providing a variable impedance transformation between the input
- 5 node and the output node using a varactor device connected in series on a signal
- 6 path from between the input node to and the output node, the variable impedance
- 7 transformation being provided in response to a power level of the output signal to
- 8 transform a first impedance at the output node to a second impedance at the input
- 9 node.
- (currently amended) The method of claim 8 wherein the varactor device
- 2 includes a ferroelectric varactor connected in series on the signal path between the
- 3 input node and the output node.
- t 10. (canceled).
- 1 11. (original) The method of claim 8 wherein the receiving of the output signal
- 2 included receiving a radio frequency output signal at the input node.
- 1 12. (original) The method of claim 8 further comprising providing a fixed
- 2 impedance transformation between the input node and the output node.

- 1 13. (currently amended) The method of claim 12 wherein the fixed impedance
- 2 transformation is provided by at least one transmission line on the a signal path
- 3 between the input node and the output node and at least one shunt capacitor
- 4 connected to the signal path.
- 1 14. (original) The method of claim 13 wherein the fixed impedance
- 2 transformation is further provided by at least one additional transmission line on a
- 3 second signal path between a supply voltage terminal and the signal path, the
- 4 second signal path at least partially being used to supply DC bias voltage to the
- 5 varactor device.

1

- 15. (currently amended) A power amplifier comprising:
- an amplifier configured to provide an output signal; and
- an impedance transformation network including an input node and
- an output node, the input node being connected to the amplifier, the output node to
- 5 be connected to a load, the impedance transformation network further including a
- 6 varactor device connected in series on a signal path from between the input node
- 7 to-and the output node, the varactor device being configured to provide a variable
- 8 impedance transformation in response to a power level of the output signal to
- 9 transform a load impedance at the output node to a desired impedance in a
- 10 forward direction at the input node, the forward direction being from the input
- 11 node to the output node.
- 1 16. (currently amended) The power amplifier of claim 15 wherein the varactor
- 2 device includes a ferroelectric varactor connected in series on the signal path
- 3 between the input node and the output node.
- 1 17. (canceled).
- 1 18. (original) The power amplifier of claim 15 wherein the amplifier is
- 2 configured to provide a radio frequency output signal.

- 1 19. (original) The power amplifier of claim 15 wherein the impedance
- 2 transformation network comprises a fixed impedance transformation circuit
- connected to the input node and the varactor device, the fixed impedance
- 4 transformation circuit including at least one transmission line on the signal path
- 5 and at least one shunt capacitor connected to the signal path.
- 1 20. (original) The power amplifier of claim 19 wherein the fixed impedance
- 2 transformation circuit includes at least one additional transmission line on a
- 3 second signal path between a supply voltage terminal and the signal path and at
- 4 least one additional shunt capacitor connected to the second signal path, the
- 5 second signal path at least partially being used to supply DC bias voltage to the
- 6 varactor device.